New York State Integrated Pest Management Program

Development of a Beetle Parasitoid for Management of Face Flies

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Type of Grant: Biological control and pest biology

Project locations: Results applicable throughout the Northeast

Abstract:

This project seeks to advance a reliable, effective, non-pesticidal, alternative pasture fly management technology for producers through the development of a face fly parasitoid readily adaptable to commercial production. This information will be used as the first brick in the foundation of a pasture-fly IPM program. Currently, there are no commercial sources of beneficial organisms for pasture fly management. The absence of such a control agent is a limiting factor in the pasture-based IPM and it is therefore critical that this study be performed. Our ultimate goals with *A. tristis* are to be able to enhance opportunities for both on-pasture, as well as, commercial rearing of this beneficial species and to promote implementation with stakeholders. This study sought to develop effective rearing techniques for the indigenous staphylinid beetle parasitoid *Aleochara tristis*, a potentially significant biological control agent of the economically important face fly. *A. tristis* was successfully reared on house fly eggs (adult beetles) and live face fly pupae. House fly pupae (neither live nor frozen-then-thawed) were not utilized by *A. tristis* in choice and no-choice studies for immature beetle development. Crushed house fly pupae (live or frozen) were not utilized as an adult food. Occasionally, adult beetles had difficulty emerging from face fly puparia. As described below, a fungal infection caused the loss of the colony at a time when we were unable to begin anew. We plan to continue our research with *A. tristis* in 2004 and build upon the valuable lessons learned this past summer.

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